

July 19, 2016

Mr. Kent Hoffman
Deputy State Director
Division of Lands and Minerals
US Bureau of Land Management
440 West 200 South, Suite 500
Salt Lake City, UT 84101-1345

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DIV. OF OIL, GAS & MINING

Re: Bureau of Land Management Research, Development and Demonstration (RD&D) Lease UTU-84087- Enefit American Oil

Dear Mr. Hoffman,

This letter is in response to the Bureau of Land Management ("BLM") letter, OIL SHALE (3900) UTU-84087 (UT-9223), dated October 30, 2015, regarding Enefit American Oil's ("EAO") BLM Research, Development and Demonstration ("RD&D") Lease UTU-84087. The BLM letter provided a brief background on the RD&D lease history and identified several points regarding EAO's potential future conversion of the RD&D lease to a commercial lease.

While EAO appreciates the BLM's desire to "come to a common understanding of BLM's expectations should EAO decide to apply for a conversion of the RD&D Lease to a commercial lease", at this time, EAO would prefer to focus on "apply[ing] for an extension of the lease term as provided in Section 4 of the [RD&D] lease." Specifically, Section 4 requires that "a *process* leading to production in commercial quantities *is being diligently pursued*, consistent with the schedule specified in the approved plan of development" [emphasis added] in opting for an extension. Please see the enclosed table titled "EAO RD&D Development Plan Delivery List" calling out the schedule of deliverables planned in the approved plan of development and the delivery status of each item, demonstrating that diligence towards commercial production has been and is currently being pursued. The option of extension beyond the primary term may be requested pending BLM response to the points identified below; said request would be submitted by EAO under separate cover.

In the October 30 letter, the BLM points out a number of issues that EAO believes to be either misunderstandings or inaccuracies that need to be addressed. Specifically, EAO has identified the following issues to be addressed at this time:

1) <u>Bulk Sample</u>: The BLM noted that "A bulk sample was also taken from a pile of material on the lease, but the source of that material is ex-situ and the BLM therefore will not consider data from that sampling effort to be probative";

2) Industrial Development Phase: The BLM's understanding of and reliance upon the "Industrial Development Phase" given the BLM's statement that "the Sub-Phase 1 and Sub-Phase 2 Reports are consistent with the commitments EAO made in its 2012 modified RD&D Development Plan. However...these reports nor the 2012 modified RD&D Development Plan address several critical matters"; and

3) <u>Economic Analysis</u>: How the activities proposed in the plan will demonstrate that "a reasonable expectation exists that the expanded operation would provide a positive return after all costs of production have been met, including the amortized costs of the capital investment".

As a point of background, EAO's RD&D Development Plan (also referred to simply as "the Plan" below) was submitted to the BLM for approval July 19, 2012. The BLM's responding approval letter, 1310 OSHL (9223rb) UTU84087, dated August, 2, 2012 states, "This update modifies the original RD&D Development Plan submitted by Oil Shale Exploration Company, LLC (OSEC) pursuant to Section 8 of the captioned lease" and "[t]hese changes have been found to be generally consistent with the original proposal for the RD&D lease and are hereby accepted." Based on this language, it has been, and remains, EAO's understanding that the BLM has "accepted" EAO's RD&D Development Plan as overriding the previous OSEC plan and as being consistent with the lease.

The three points identified above are addressed in detail hereinafter.

## I. Bulk Sample

The BLM October 30<sup>th</sup> letter states that, because the source of the stockpile on the lease property is "exsitu" that "the BLM therefore will not consider data from that sampling effort to be probative". This statement is in direct conflict with EAO's BLM-approved RD&D Development Plan, in which the BLM themselves approved testing from this same stockpile. Via said approval, the BLM thus acknowledged that, upon completion of such testing (together with completion of the Plan), "the BLM shall recognize proof of commercial production as required under the lease..." (see RD&D Development Plan, Section 2, page 4, paragraph 3).

EAO clearly indicated in Section 2.3.2 of the RD&D Development Plan the intent to collect a bulk sample of oil shale from this stockpile for test work, stating that, "A portion of this sample is planned to come from the existing White River Mine stockpile." The BLM raised no question as to the source of the oil shale rock in the White River Mine stockpile when approving the Plan, nor did they caution that data produced from it may not be considered "probative". On the contrary, as demonstrated below, the BLM accepted testing of this material through the Enefit demo facility as a key step towards proof of commercial production, per the lease.

Further, please keep in mind that the oil shale deposit in the area of RD&D lease is more than 1,000 feet deep with no surface outcropping. The White River Mine itself is currently sealed and partially flooded. Short of undertaking a very expensive mine renovation and pumping exercise, with no certainty that a future conversion to a commercial lease justifying such a significant investment would be forthcoming, there is no other option for EAO to remove a bulk sample from the mine, aside from the referenced stockpiles. EAO took these limitations - that it is not technically or economically feasible to remove a bulk sample from the White River Mine – into account when preparing our RD&D Development Plan, which the BLM subsequently approved. It is also important to note that reliance on the stockpiles results in far less environmental impact than would result from restarting even small-scale research sampling from the mine given the extensive pumping and renovation needed to re-open the mine.

Additionally, using the "prudent person" standard, it is obvious that the oil shale stockpiles located on the RD&D lease area were placed there when the oil shale was excavated during development of the White River Mine in the 1980s. There are no other oil shale mines in a several mile radius which could have

generated this material, either historically or recently, meaning the stockpile material must have originated from the lease property. Further, had the material been mined elsewhere other than the RD&D lease area, the BLM most certainly would not have authorized that material to be deposited on their property without proper analysis and documentation (and it is highly unlikely that the volume of material in the White River Mine stockpiles was dumped illegally without the BLM's knowledge).

However, during a meeting with BLM representatives on November 12, 2015 to discuss the October 30<sup>th</sup> letter, a BLM representative disputed being able to confirm that the stockpile indeed originated from the RD&D lease and reinforced their view that, as such, the data provided from the test work conducted on this stockpile was not probative. As a result, EAO submitted a Freedom of Information Act request to the BLM on January 11, 2016 seeking documentation pertaining to the stockpile. The BLM responded to this request on June 29, 2016 and, among a number of other documents, included a file titled "06-280 Public Comments Redaction\_Redacted.pdf". On page 35 of that document, there is a BLM-issued environmental assessment titled, "Proposed Leasing of Stockpiles of Oil Shale from the Location of the former White River Shale Project (east-central Uintah County, Utah)". On page 36, the document clearly states that the BLM "...proposes to lease stockpiles of kerogen bearing marIstone [popularly known as oil shale] that were excavated from the mine workings at the location of former oil shale leases Ua-Ub (formerly known as the White River Shale Project). Two large stockpiles are situated in T10S. R.24E. Section 22 W2NWSE. Several smaller stockpiles are located within the E2SESE (see Drawing1 of Appendix B)" [emphasis added].

According to the BLM's own records and National Environmental Policy Act (NEPA) documentation exploring leasing these very stockpiles, the stockpiles used for the bulk sample are indeed from the mine on the RD&D lease property in question. Therefore, as already approved in EAO's RD&D Development Plan, there should be no question as to whether the data provided from the testing using this stockpiled material is probative. EAO would appreciate BLM's confirmation that they will indeed accept this data as contemplated in the 2012 approved RD&D Development Plan.

# II. Industrial Development Phase

In the October 30<sup>th</sup> letter, the BLM acknowledges that, on August 2, 2012, the BLM formally approved EAO's RD&D Development Plan, noting that the Plan was "found to be generally consistent with the original proposal for the RD&D lease and ... hereby accepted". Section 2, page 2, paragraph 2 of that Plan specifically states (as is again acknowledged by BLM in the October 30<sup>th</sup> letter), that the RD&D Development Plan "will be followed by an 'Industrial Development Phase' which is beyond the scope of work of this RD&D work plan." Continuing, Section 2, page 2, paragraph 5 of the RD&D Development Plan states that there would be a "Predevelopment Stage" broken down into an "RD&D Phase", made up of two sub-phases, followed by the "Industrial Development Phase," and that "The second sub-phase [of the RD&D Phase] ends with the completion of the Enefit Pilot testing and PreFEED (Preliminary Front End Engineering Design) and completion of the application for conversion of the lease".

Further (and as noted above), Section 2, page 4, paragraph 3 of the Plan clearly states, "Upon completion of this work plan and completion of demo testing, the BLM shall recognize proof of commercial production as required under the lease, which shall require BLM to convert EAO's RD&D lease to a commercial lease, assuming, and at the time of, successful completion of the NEPA process and delivery of all information outlined in 'Section 23. Conversion' of the RD&D lease." The Plan goes on to state in paragraph 4, "Following the completion of demo testing during sub-phase 2, Enefit will continue the industrial

development work needed in order to complete the design and permitting for the industrial facility during the additional Industrial Development Phase, which is beyond the scope of the RD&D work plan." The Plan continues by providing a detailed list of the data and reports that would be provided to the BLM under Sub-Phase 1 and Sub-Phase 2 of the RD&D Phase. Section 2.4, page 11, paragraph 1 of the Plan states, "EAO's provision of the information above shall be deemed to meet the criteria for completion of Sub-Phase 2 of the RD&D Phase and of the entire RD&D work plan needed to prove commercial viability under the lease" [emphasis added].

These references, and the sequencing described throughout the BLM-approved Plan, demonstrate that EAO was abundantly clear regarding the fact that the "Industrial Development Phase" was never intended to be part of the BLM's decision-making on Enefit's potential application for conversion (or extension request). Rather, the Industrial Development Phase was contemplated to take place *following* the lease conversion process. The BLM was fully aware when approving the RD&D Development Plan that the Industrial Development Phase was beyond the scope of the BLM's potential future consideration of converting the RD&D lease to a commercial lease. BLM's 2012 approval of the RD&D Development Plan is an approval of this sequencing and acknowledgement of this fact.

Further, based on the 2012 approval, EAO undertook considerable effort and expense to carry out the numerous studies and analysis required under the RD&D Development Plan. During that process, EAO submitted the Sub-Phase 1 report to the BLM on March 26, 2013. This Sub-Phase 1 report clearly states in Section, page 2, fifth bullet that, as part of the RD&D Sub-Phase 2 activities, the "Application to BLM to trigger [the] conversion process from RD&D lease to Commercial lease" would be provided. In doing so, EAO was very clear that the Industrial Development Phase was not intended to be part of the submission to BLM to convert the RD&D lease to a commercial lease.

EAO then submitted the Sub-Phase 2 report on March 14, 2014, again noting in Section 1, page 1, paragraph 3 that "EAO's provision of the [Sub-Phase 2 deliverables listed] above shall be deemed to meet the criteria for completion of Sub-Phase 2 of the RD&D phase *and of the entire RD&D work plan needed to prove commercial viability under the lease*" [emphasis added]. Also, in Section 2.8 of the Sub-Phase 2 report, starting on page 31, the report details the sequence of information needed to prepare the application for conversion — as originally set out in the RD&D work plan - which does not include any mention of the Industrial Development Phase. Following the BLM's review of these reports, over the course of nearly four years of work and expenditure by EAO, the BLM never requested a change to the approved RD&D Development Plan and requirements prior to extension or conversion to include the Industrial Development Phase.

It is also important to note that, in addition to the Sub-Phase 1 and Sub-Phase 2 reports provided to the BLM in March 2013 and March 2014, respectively, EAO has been submitting (and continues to submit) quarterly RD&D update reports to the BLM. The BLM has been kept timely apprised by EAO of ongoing work activities, both directly and tangentially related to the RD&D lease, and the BLM has made no mention of needing additional information or requesting a change to the approved RD&D work program.

By accepting and approving EAO's 2012 RD&D Development Plan, the BLM clearly understood at the time of the approval that the "Industrial Development Phase" was not part of the RD&D Development Plan.

Rather, the Industrial Development Phase was intended to be a set of activities to take place following a potential RD&D-to-commercial lease conversion and before construction of a commercial facility. Therefore, the details of the "Industrial Development Phase" were never proposed by EAO to be part of any application to convert the RD&D lease to a commercial lease. The language in the RD&D Development Plan, approved by BLM, is very clear that this phase is beyond the scope of the RD&D Development Plan and subsequent to BLM's consideration of EAO's application to convert to a commercial lease. This concept is further reinforced in both the Sub-Phase 1 and Sub-Phase 2 reports.

### III. Economic Analysis

The October 30<sup>th</sup> letter raises a question of how the activities proposed in the Plan will demonstrate that "a reasonable expectation exists that the expanded operation would provide a positive return after all costs of production have been met, including the amortized costs of the capital investment." EAO recognizes this is a clear condition of the RD&D lease and has already committed to providing the required information to the BLM in the RD&D Development Plan.

Section 2, page 4, paragraph 3 of the Plan states, "As noted in the work program outlined below..., Enefit will also carry out a market study and multiple engineering feasibility studies on the Utah resource covering the mining and processing that will include design and economic data sufficient to estimate the project economics and demonstrate the lease requirement of providing an expectation of positive return from the RD&D lease." The Plan goes on to say, "The necessary engineering and economic proof can be obtained through the combination of bench testing, demo testing, engineering and Enefit's experience in Estonia." On Section 2.4, page 11, under the "List of data and reports to be submitted to meet criteria for completion of Development Sub-Phase 2", item "f" clearly indicates "Economic evaluation of commerciality".

In EAO's Sub-Phase 2 report, Section 2.8, page 32, paragraph 3 notes, "Following the BLM's review and subsequent acceptance of these of these work reports, EAO will progress with the remaining two deliverables under the Work Plan item 2.4: — Application to BLM to trigger lease conversion process from RD&D lease to commercial lease; and — Economic evaluation of commerciality." As such, EAO is aware that the economic evaluation of commerciality has not yet been provided to the BLM, but remains committed to doing so.

However, as noted in the Sub-Phase 2 report, EAO has been awaiting agency feedback on the various technical reports provided to the BLM in the Sub-Phase 1 and Sub-Phase 2 reports, which EAO anticipates will input into and impact this economic evaluation. If the BLM confirms that they have no technical concerns with the deliverables provided by EAO or can provide a list of issues to be addressed in those reports, EAO will be in position to either undertake work on the economic evaluation or address the technical issues raised by the BLM prior to developing the economic evaluation.

As an example, one such technical issue verbally raised by the BLM during the meeting on November 12, 2015 was the Mine Conceptual Study, Section 2.1.2 in the Sub-Phase 1 report. During the meeting, BLM representatives raised concern that the current plan does not show that all of the BLM lease property would be mined. EAO acknowledges this comment and the lease requirement under Section 8 (b)(6) that all mineable portions of the oil shale deposit must be mined/developed to achieve the ultimate maximum recovery, and will endeavor to address this comment. That being said, EAO would appreciate a comprehensive set of comments, such as this, on the technical documents provided, in order to address all technical issues raised by the BLM and then prepare the subsequent economic evaluation. Changes to

the design and engineering planned for the RD&D lease property will impact the economic evaluation, thus requiring BLM's feedback on the Sub-Phase 1 and Sub-Phase 2 reports before EAO can complete the two outstanding Plan items – economic evaluation and application for conversion.

## IV. Summary

There are a number of issues that remain to be addressed before EAO can proceed with an application to convert the RD&D lease to a commercial lease. For example, 1) The three key issues raised herein and in the BLM October 30th letter need to be clarified; 2) EAO needs to revise the conceptual mine plan connecting the Enefit South property to the BLM lease to demonstrate "ultimate maximum recovery" of the lease property; 3) EAO needs to update and prepare an economic model as required under the BLM-approved RD&D Development Plan and as discussed above; and 4) Comprehensive feedback from the BLM on the technical reports already submitted is required in order to inform EAO's two outstanding Plan requirements.

Following mutual clarification and delivery on these four items, to the satisfaction of the BLM, EAO will then need to prepare the conversion application, to include a) A mine Plan of Development; b) Payment of a bonus (in accordance with the RD&D lease terms); c) Documentation of consultation with state and local officials to develop a plan for mitigating socioeconomic impacts; and d) Adequate bonding. EAO understands that a NEPA analysis would also need to be completed by the BLM prior to issuing authorization to proceed with commercial oil shale development, per Section 23 of the RD&D lease. It is EAO's understanding that the NEPA analysis does not need to be completed by the BLM prior to the RD&D lease term expiry – primary or extended – and rather is considered subsequent to the RD&D lease term period; if EAO's understanding is incorrect, we kindly request the BLM clarify the sequence and timing of the NEPA analysis in accordance with Section 23 of the RD&D lease. EAO cannot move forward with these outstanding items until the BLM provides clear feedback on the EAO supplied RD&D Development Plan deliverables (noted in point 4). Should EAO determine that these items cannot be completed by the end of the primary lease term, we may elect to file a formal request for extension, as contemplated in the lease, prior to the end of the primary ten-year lease term (July 1, 2017).

As noted, EAO would like to clarify the BLM's extension review process and approval requirements prior to formally submitting a request for extension. EAO strongly believes that it has demonstrated that "a *process* leading to production in commercial quantities *is being diligently pursued*, consistent with the schedule specified in the approved plan of development" [emphasis added] per the submission of its Sub-Phase 1 and Sub-Phase 2 work reports. The BLM also acknowledged this in the October 30<sup>th</sup> letter stating "the Sub Phase 1 and Sub Phase 2 Reports are consistent with the commitments EAO made in its 2012 modified RD&D Development Plan."

EAO looks forward to your response and stands ready to meet to discuss the issues raised herein at your convenience.

Kind Regards,

Rikki Hrenko-Browning

CEO

**Enefit American Oil** 

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# EAO RD&D Development Plan Delivery List

	RD&D Development Plan Delivery Item	Delivery Date	Comment
	RD&D Sub-Phase 1		
1	Results of core description and updated geologic assessment of the property, including new assay work demonstrating the composition of the shale located on the BLM RD&D lease as well as that on the EAO neighboring lands	March 2013	
2	A conceptual mining study tying the BLM property and the private Skyline property together into an integrated mining plan with a description of the mining methods, production, and mine advancement	March 2013	To be adjusted by EAO to meet the lease requirement of "ultimate maximum recovery"
3	Summary results of the Enefit bench testing	March 2013	
4	Summary results of the Enefit conceptual engineering	March 2013	
5	An update on the status of the Enefit demo construction	March 2013	
6	Summary results from the Enefit produced Utah shale oil crude assay testing program	March 2013	
7	Summary conclusions from the Utah market study	March 2013	
8	A status report on the weather and air quality monitoring station results	March 2013	
	RD&D Sub-Pha	ase 2	
9	Updated geologic assessment of the properties, including new assay work confirming the composition of the shale located on the BLM RD&D lease as well as the adjacent private Skyline property	March 2013	
10	An update of the mine conceptual study showing how the PRLA is integral to the overall mining operation/unit	March 2013	To be adjusted by EAO to meet the lease requirement of "ultimate maximum recovery"
11	Summary results of the Enefit demo testing	March 2014	
12	Summary report on the startup and operations of the new generation Enefit280 plant in Estonia	March 2013	
13	Description of the oil upgrading technology provider(s) and technical solution as well as summary results from the Enefit oil upgrading pilot tests and conceptual engineering report	March 2014	
14	A status report documenting the completion and main results of the weather and air quality monitoring station data collection	March 2014	
15	Application to BLM to trigger conversion process from RD&D lease to Commercial lease	Not Yet Provided	Pending BLM review/acceptance of "Economic evaluation of commerciality"
16	Economic evaluation of commerciality	Not Yet Provided	Pending BLM review/acceptance on Sub-Phase 1 and Sub-Phase 2 deliverables